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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,276	04/19/2004	Teruo Koike	ST3001-0042	9916

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EXAMINER

PAYNE, SHARON E

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 09/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/826,276

Applicant(s)

KOIKE ET AL.

Examiner

Sharon E. Payne

Art Unit

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The indicated allowability of claims 2, 3, 6, 9-16, 19, 20, 21 and 24 is withdrawn in view of the newly discovered reference(s) to an axial LED source. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 112

2. Claims 3, 10, 12, 16 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 3 is indefinite for reciting the limitation “wherein each LED array is arranged in a row direction such that a projected image of a light distribution pattern formed by light reflected from a corresponding one of said reflective surfaces has a longitudinal axis in a direction substantially parallel with a horizontal line.” How is the lamp oriented to obtain the horizontal line? Since the lamp is not oriented any certain way in the claim, one cannot tell how the LEDs are not be oriented in relation to the reflector to meet the limitation of the claim.

4. Claims 10, 12, 16 and 21 are necessarily included due to their dependency.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-3 and 26-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Martin et al. (U.S. Patent 7,048,412).

Regarding claim 1, Martin et al. discloses a vehicle lamp for emitting light and forming a predetermined light distribution pattern, comprising a plurality of light sources (abstract), a plurality of corresponding reflective surfaces (abstract), wherein each of said light sources includes at least one LED array (abstract) with LED chips arranged in a row (Fig. 19A, see squares), and each of said reflective surfaces is arranged in combination with one of said light sources to generate light beams each having a certain light distribution pattern (Figs. 19A-19D) the light sources and reflective surfaces configured such that each of the light beams having a certain light distribution pattern are superimposed with each other to form said predetermined light distribution pattern (Fig. 19C). and a light source holder shaped in a substantially polygonal form having sides (Figs. 19A-19D) and a longitudinal axis in a direction that is substantially parallel with an optical axis of said lam (Figs. 19A-19D), wherein each of the sides includes at least one of said plurality of light sources (Fig. 8B).

Concerning claim 2, Martin et al. discloses each side of said light source holder has one of said at least one LED array arranged thereon (Figs. 8A and 8B) and a row direction of the one of said at least one LED array is configured in a direction parallel with said longitudinal axis (Fig. 8A, reference numbers 810-1 and 810-3), and wherein

said reflective surfaces (814-2, 814-3 and 814-1) are located such that they surround said light source holder (Fig. 8B).

Regarding claim 3, as best understood, Martin et al. discloses each side of the light source holder has one of said at least one LED array arranged thereon (Figs. 8A and 8B, center, 810-1, 810-2 and 810-3), and wherein each LED array is arranged in a row direction such that a projected image of a light distribution pattern formed by light reflected from a corresponding one of said reflective surfaces has a longitudinal axis in a direction substantially parallel with a horizontal line (Fig. 19C).

Concerning claim 26, Martin et al. discloses a light source including at least three LED arrays (Figs. 8A and 8B), each LED array including a plurality of LED chips formed thereon (reference numbers 810-1, 810-2 and 810-3), at least three reflector surfaces located adjacent said at least three LED arrays (Fig. 8B, reference numbers 814-1, 814-2 and 814-3), respectively, each of said reflector surfaces being configured to direct light emitted from one of said at least three LED arrays into a certain light distribution pattern such that the at least three reflector surfaces produce a plurality of certain light distribution patterns (Fig. 8B), and said plurality of certain light distribution patterns combine to form a predetermined light distribution pattern (Figs. 19A-19D).

Regarding claim 27, Martin et al. discloses a light source holder located adjacent said at least three reflectors (Fig. 8B, middle) and having a plurality of sides extending in a direction parallel to an optical axis of the LED type lamp (Fig. 8A) wherein at least one of said at least three LED arrays is located adjacent at least one of said plurality of sides (Fig. 8B).

Concerning claim 28, Martin et al. discloses a plurality of light sources each including an LED chip (abstract) a reflector located adjacent the light sources (Fig. 8B) a light source holder including at least three surfaces that each extend substantially parallel to the optical axis of the LED type lamp (Figs. 8A and 8B) and the at least one of the LED chips is oriented on each of the at least three surfaces such that light emitted from the LED chips is directed towards the reflector (Figs. 8A and 8B).

Regarding claim 29, Martin et al. discloses a plurality of LED chips formed in an LED array on at least one of the surfaces of the light source holder (Fig 8A).

Concerning claim 30, Martin et al. discloses each of the light sources includes a plurality of LED chips (Fig 8A) and at least three surfaces that extend along the optical axis of the lamp (Fig. 8B), each of said surfaces including at least one of said plurality of LED chips located thereon (Fig. 8B), and said reflector including a plurality of different shaped reflective surfaces each corresponding to a different one of said surfaces of said light source holder (column 4, lines 48-55).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 4, 8-10 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. (embodiment in Figs. 8A and 8b) in view of Martin et al.

(embodiments in Figs. 10C and 22). (This has to be a 35 USC 103 rejection, since two embodiments of the invention are being discussed in each rejection.)

Regarding claims 4, 9 and 10, Figs. 8A and 8B do not disclose a shade. Fig. 10C discloses a shade (reference number 1030-2) configured to block a part of light emitted from one of the light sources and arranged in the vicinity of the one of the light sources (Fig. 10C) and in an optical path extending from the one of the light sources to one of the reflective surfaces to form the predetermined light distribution pattern (Fig. 10C).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the shade of Fig. 10C in the apparatus of Figs. 8A and 8B to produce the desired light distribution.

Concerning claims 8, 20, 21 and 22, Figs. 8A and 8B do not disclose tilted LED chips. Fig. 22 discloses the LED chips being tilted with respect to an optical axis of the lamp so as to direct light to one of the reflective surfaces (Fig. 22, top middle).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the shade of Fig. 22 in the apparatus of Figs. 8A and 8B to produce the desired light distribution.

9. Claims 5 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. in view of Chen (WO 2052190 A1).

Regarding claim 5, Martin et al. does not disclose a shade located in a lateral direction of the light source holder. Chen discloses a shade located in a lateral direction

from the light source holder (English abstract, Fig. 2) and in a direction substantially perpendicular to the longitudinal axis of the light holder (English abstract, Fig. 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the configuration of Chen in the apparatus of Martin et al. to make the light output brighter. See the English abstract of Chen.

Regarding claim 23, Martin et al. discloses the LED chips being tilted with respect to an optical axis of the lamp so as to direct light to one of the reflective surfaces (Fig. 22, top middle).

10. Claims 7, 15, 16, 17 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. in view of Bezos et al. (U.S. Patent 4,654,629).

Regarding claims 7, 15, 16 and 17, Martin et al. does not disclose a control system. Bezos et al. discloses the vehicle lamp being configured such that one of a number and a position of the LED chips to be turned on in each LED array or between LED arrays can be varied such that the predetermined light distribution pattern can be varied (abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the control system of Bezos et al. in the apparatus of Martin et al. to signal other car in a predetermined way. See the abstract of Bezos et al.

Regarding claim 25, Martin et al. discloses the LED chips being tilted with respect to an optical axis of the lamp so as to direct light to one of the reflective surfaces (Fig. 22, top middle).

11. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. in view of Chen as applied to claim 5 above, and further in view of Bezos et al.

Regarding claim 18, Martin et al. and Chen do not disclose a control system. Bezos et al. discloses the vehicle lamp being configured such that one of a number and a position of the LED chips to be turned on in each LED array or between LED arrays can be varied such that the predetermined light distribution pattern can be varied (abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the control system of Bezos et al. in the apparatus of Martin et al. and Chen to signal other car in a predetermined way. See the abstract of Bezos et al.

12. Claims 6, 11-13 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. in view of Abtahi et al. (U.S. Patent 5,890,794).

Regarding claims 6, 11, 12 and 13, Martin et al. does not disclose a cylindrical lens. Abtahi et al. discloses at least one of the LED arrays including a cylindrical lens (abstract, Fig. 5 on the outside) having a longitudinal axis in a row direction of the at least one of the LED arrays (Fig. 5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the configuration of Abtahi et al. in the apparatus of Martin et al. to protect the LEDs while transmitting their light.

Regarding claim 24, Martin et al. discloses the LED chips being tilted with respect to an optical axis of the lamp so as to direct light to one of the reflective surfaces (Fig. 22, top middle).

13. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Martin in view of Chen as applied to claim 5 above, and further in view of Abtahi et al.

Regarding claim 14, Martin et al. and Chen do not disclose a cylindrical lens. Abtahi et al. discloses at least one of the LED arrays including a cylindrical lens (abstract, Fig. 5 on the outside) having a longitudinal axis in a row direction of the at least one of the LED arrays (Fig. 5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the configuration of Abtahi et al. in the apparatus of Martin et al. and Chen to protect the LEDs while transmitting their light.

14. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. in view of Abtahi et al. as applied to claim 6 above, and further in view of Bezos et al.

Regarding claim 19, Martin et al. and Abtahi et al. do not disclose a control system. Bezos et al. discloses the vehicle lamp being configured such that one of a

number and a position of the LED chips to be turned on in each LED array or between LED arrays can be varied such that the predetermined light distribution pattern can be varied (abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the control system of Bezos et al. in the apparatus of Martin et al. and Abtahi et al. to signal other car in a predetermined way. See the abstract of Bezos et al.

Response to Arguments

15. Applicant's arguments, see the amendment, filed 6/21/06, with respect to the rejection(s) of claim(s) 1, 4, 5, 7, 8, 17, 19, 22, 23, 25, 26-30 under various combinations of Amano, Oyama, Wesson and Osram have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Martin et al. in various combinations with Abtahi et al. Bezos et al. and Chen for the reasons delineated above.


Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharon E. Payne whose telephone number is (571) 272-2379. The examiner can normally be reached on regular business hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

17. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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